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ABSTRACT

The effects of sentence combining instruction on student writing skills (punctuation, capitalization, grammar, and syntactic maturity) and reading achievement were studied in eight-, nine-, ten-, and eleven-year-old children. The experimental group, which received instruction in sentence combining, consisted of 20 students from each age group. This group was matched by age, sex, and socioeconomic status to a control group of students receiving regular instructional activities. Both groups completed the same sets of pretests and posttests: reading tests, language arts tests, and writing samples. After four months of instruction, there were scattered instances of significant differences between and among variables, but it was impossible to identify any patterns that would clarify or explain the existing differences. The results indicated no significant differences in language arts achievement or in syntactic maturity between the groups. Within the experimental group, there was no significant difference between the syntactic maturity scores of boys and girls. The results did not suggest any correlation between syntactic maturity or instruction in sentence combining and achievement in reading comprehension. Instruction in sentence combining was not found to be more effective at any one age or grade level than at other levels. (RL)

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The Effects of Sentence Combining Instruction on Syntactic Maturity, Reading Achievement, and Language Arts Skills Achievement

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The Effects of Sentence Combining Instruction on Syntactic Maturity, Reading Achievement, and Language Arts Skills Achievement

When most students enter elementary school, they have acquired the ability to use English orally in a fluent and acceptable manner. They are able to pronounce words, create sentences, and express themselves in a way that is understandable to their peers and to adults. The school's responsibility is to help students increase their use and understanding of spoken English and to introduce them to written language. This includes developing an expanded vocabulary, learning the correct usage of words, and learning the conventions unique to the written use of English. As students grow older, they are expected to use language in a more mature form, as exemplified by speaking or writing in an expressive, interesting manner and by using words with the precise meaning for a specific purpose.

Traditionally, the emphasis in English instruction has been on grammar study. However, research related to the effectiveness of traditional grammar study does not support the hypothesis that there is a positive relationship between the study of grammar and some aspects of written composition (1). According to Mellon (2), most of the grammar-related research has examined almost exclusively the editorial claim for grammar study to the neglect of claims related to improved sentence structure. Mellon also points out that teachers have commonly relied on error-centered methods in which the focus is on recognizing and correcting errors rather than on a more positive approach which would emphasize student production of acceptable and appropriate sentences.

The minimal success in improving written composition through the study of grammar strongly suggests the need for a different approach. One alternative which has been receiving increasing attention is sentence combining--the process

of combining two or more kernel sentences into fewer sentences conveying the same idea. For example, the two kernel sentences below can be combined in many different ways: Lee is frightened. I am surprised. Instruction in sentence combining can focus attention on a variety of possible sentence structures. The same lessons can also serve as a focus for instruction in other aspects of language arts such as the mechanics of written composition.

Related Research

Several studies have been conducted on the use of sentence combining to increase the syntactic maturity of children's writing. Syntactic maturity refers to the degree of complexity of sentence structures used in written composition. In much of the sentence combining research, syntactic maturity has been measured by the number of words contained in each "minimal terminal unit" or "T-unit" (defined by Hunt [3:49] as "...one main clause plus the subordinate clauses attached to or embedded within it").

In one study, Miller and Ney (4) looked at the effect of systematic oral exercises on the writing of fourth grade students. They reported that only the experimental group made a significant gain in the use of the structures that had been practiced.

Mellon (2:73) studied the effects of practice in sentence combining on the syntactic fluency of seventh graders. His findings indicate that a systematic program of transformational sentence combining increased " . . . the rate at which the sentence structure of the students' own writing becomes more highly elaborated (or differentiated) and thus more mature."

Hunt and O'Donnell (5) conducted an experiment designed to determine whether materials created for fourth grade children would enhance normal

syntactic development. Their findings indicate that the experimental curriculum had a significant effect on the students' free writing, both in fluency and in the maturity of syntactic structure of their sentences. An additional finding suggested that the curriculum was successful in improving one aspect of reading skill.

Another study of sentence combining was conducted by O'Hare (1). His plan was to develop a sentence combining system which would not be dependent on a student's knowledge of formal grammar, would exploit the basic linguistic competencies which students already possess, and would be easy to understand and use. Based on his results, he concluded that the syntactic maturity of the writing of the experimental group was significantly greater than that of the control group.

In an extensive review of research related to sentence combining as a curricular activity, Stotsky (6:67) suggests that the success of sentence combining writing programs may support the " . . . concept of writing as a profound mental activity, not simply as a spontaneous transcription of oral speech."

Positive conclusions have been reported in these studies of the effects of sentence combining instruction on children's written compositions. In each case, greater syntactic maturity in their free writing was achieved by students who participated in the experimental programs than by those who did not. Such results support the conclusion that using sentence combining as the focus of instruction can be a more successful means to help students write effectively than traditional programs have been.

Overview of the Study

The present study differs from previous studies of the effects of sentence

combining instruction in that it extends the areas of inquiry to include the effects of sentence combining instruction on students' use of the conventions of written English--punctuation, capitalization and grammar (defined as language arts achievement in this study).

This study also extends the research on the effects of sentence combining instruction on syntactic maturity and reading comprehension to include students from eight through eleven years old.

The following hypotheses and questions were examined:

Hypotheses:

1. There is no difference in language arts achievement between students who have received instruction in sentence combining and those who have not.

2. There is no difference in syntactic maturity of free writing between students who have received instruction in sentence combining and those who have not.

3. There is no difference in syntactic maturity of free writing between boys and girls, all of whom have received instruction in sentence combining.

Questions:

1. Do students who have received instruction in sentence combining perform better in reading comprehension than those who have not received such instruction?

2. Is there a correlation between syntactic maturity of students' free writing and their reading comprehension?

3. Is there an age-grade level in the elementary school at which students achieve optimum gains in syntactic maturity of free writing after receiving instruction in sentence combining?

Method

Subjects

An experimental group and a control group were used for this study. The experimental group consisted of 80 students, 20 randomly selected from each of the 8, 9, 10, and 11 year old age groups of the McGuffey Laboratory School at Miami University. In each age group, the subjects were divided evenly between boys and girls. The control group was selected in the same manner from another school which serves students from similar backgrounds. The groups were matched by age, sex and socioeconomic status.

Instruments

Both groups completed the same sets of pre- and posttests. The pretest for language arts and reading achievement was one form of the Ohio Survey Test (a battery of achievement tests with nationally standardized norms). The sub-tests in language arts were Capitalization, Punctuation, Grammar and Effective Expression. A second form of the same test was used as the posttest.

Pretests to determine the level of syntactic maturity consisted of five creative stories; the posttests required an additional five stories for each student. The motivations for these stories were to: tell the story of a film which was shown without the sound (one story); complete a story for which the beginning lines were supplied (one story); and tell stories based on given topics (three stories). The measurement of syntactic maturity was determined by the number of words per T-unit.

The five creative writing pretests were completed by both groups of students during the three-week period between Thanksgiving and Christmas vacations. The achievement pretests were administered in January. Posttesting started the last week of April and was completed by the middle of May.

Treatment

The experimental group participated in a series of sentence combining lessons prepared by the author. The content of the lessons was based on the data from Hunt's (3) study of the grammatical structures used by fourth, eighth, and twelfth graders. The structures used in the lessons included coordination inside T-units, relative clauses, nominals, adverbs (clauses and single words), and questions. Relative clauses, nominals, and adverbs are structures for which Hunt found significant differences in usage at different grade levels. Coordination inside T-units and questions were included as awareness activities to provide points of departure for students to discuss and build on what they already know and do that involves sentence combining.

In addition to the lessons emphasizing specific structures, students did oral and written activities in which they were encouraged to combine sentences in any logical, acceptable manner. These lessons were included to encourage students to explore their language by trying out various combinations.

In lessons involving written expression, reasonable attention was given to correct punctuation and capitalization. All printed material presented to students was written correctly. Students were encouraged to follow the written models for capitalization and punctuation in their own writing.

The lessons were taught by the regular instructors at the Laboratory School. There were 31 lessons used over a period of four months. Each lesson included a ten to twenty minute presentation or discussion period led by the instructor. About 70 percent of the lessons included a writing activity which was completed individually or in small groups without teacher assistance. In addition to the lessons, the students did a creative writing activity at least once every two weeks.

During the same four-month period, the control group carried out their

regular instructional activities which were based on teacher-prepared lessons on skills and topics identified in the school curriculum, lessons developed in response to special needs and interests of the students, creative writing, and grade-level textbook lessons.

Results

Using the SPSS computer program on pre- and posttest scores (Ohio Survey reading scores, Ohio Survey language arts scores, and syntactic maturity scores), a univariate analysis of variance was performed to test for significance.*

The data is presented in Tables 1, 2, and 3. Table 1 shows the mean raw scores for all tests by age-group and school. Table 2 reports the analysis of variance for the 8-year old groups for 'time' and 'school x time.' Table 3 does the same for the 9, 10 and 11 year olds, and also includes 'school x age x time'. (A preliminary analysis of the data indicated that the central tendency for the 8-year old groups differed widely from that for the 9, 10 and 11 year olds; therefore, the data for the 8-year olds was analyzed separately.)

(Insert Tables 1, 2, and 3 approximately here.)

The results are mixed. There are scattered instances of significant differences between and among variables. However, it is impossible to identify any patterns that would clarify or explain the existing differences.

In terms of the hypotheses, the results indicate that there is no significant difference in language arts achievement or in syntactic maturity between the two groups. Within the experimental group, there is no significant difference between boys and girls in their syntactic maturity.

* The author wishes to express appreciation to Dr. Joseph Simpson and Dr. Drea Zigarmi for their advice and help on the analysis of this data.

In answer to the questions that were posed, the results do not suggest any correlation between syntactic maturity or instruction in sentence combining and achievement in reading comprehension. Instruction in sentence combining was not found to be more effective at any one age-grade level than at other levels.

Discussion

The results indicate that there were no significant differences in achievement between the two groups participating in this study. This leads to the conclusion that sentence combining is as effective an approach to instruction in language arts as traditional methods have been.

The positive findings of earlier studies favoring sentence combining as a means to improve children's writing and reading comprehension are not supported by this study. This discrepancy may be related to differences in emphasis in the studies. Except for the Hunt and O'Donnell (5) experiment, each of the previous studies focused on a limited set of sentence combining models. Instruction in the present study was more open-ended, with a strong emphasis on exploring and selecting from a wide variety of choices of expression. The diversity within the instruction may have made it less likely that students would achieve significant gains on specific skills within the four-month period.

A unique feature of the present study was the examination of the effect of sentence combining instruction on achievement in the language arts skills of capitalization, punctuation, and grammar. During the four-month research period, the experimental group received no planned, directed instruction in these skills. However, this group did attain the same level of achivement in these skills as the group which had received regular skill instruction.

This finding leads to the conclusion that sentence combining can be an effective alternative to traditional approaches to helping children learn to use the conventions of written English. Through the years, language arts instruction has developed into a loose collection of bits and pieces of information and skills to be learned and applied. It appears that sentence combining may provide a much-needed focal point. Sentence combining lessons can be used to improve syntactic maturity and, simultaneously, to teach the mechanics of written English--thus serving as the unifying element of the language arts program.

The variables which had the most significant effect on students' achievement in free writing, language arts skills, and reading were age and time. Studies of language development (3, 7, 8) indicate there is a definite trend toward greater syntactic maturity in both oral and written expression as children grow older. This study supports that finding. It also leads to further reflection on questions such as:

Are there certain elements of language development that would occur at a normal pace without the influence of the school?

Does schooling actually make a difference in children's ability to use their language?

What aspects of language growth are most affected by instruction in school?

Does instruction in sentence combining have different effects on students from different socioeconomic groups?

Does normal language development need a given amount of regular practice such as provided by schools? If so, does it matter what approach is used?

These and other related questions are beyond the scope of this study. However, they do need attention and deserve consideration by researchers in the area of language development and learning.

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MEAN RAW SCORES--SYNTACTIC MATURITY AND OHIO SURVEY TEST

		Age	N	Words per T-Unit	Capitalization	Punctuation	Grammar	Effective Expression	Reading
PRETESTS	Experimental Group	8	20	7.04	3.40	4.25	10.70	11.70	43.30
		9	20	8.07	6.35	5.60	13.60	13.45	54.35
		10	20	9.06	6.30	6.00	12.90	*	*
		11	19	8.79	6.21	7.26	14.05	13.10	51.26
	Control Group	8	18	7.85	6.39	4.50	12.39	13.00	48.00
		9	20	8.16	6.10	5.45	12.90	12.95	51.75
		10	17	8.45	6.11	5.53	11.59	*	*
		11	20	9.60	7.35	7.00	15.45	14.90	62.50
POSTTESTS	Experimental Group	8	19	8.76	4.79	4.84	12.16	11.95	49.16
		9	19	8.48	7.26	6.26	15.79	14.40	59.80
		10	20	8.64	6.00	6.40	14.15	*	*
		11	19	9.49	6.53	6.84	15.11	13.57	54.31
	Control Group	8	19	8.60	7.79	6.95	12.79	12.95	57.68
		9	19	8.05	7.10	7.47	14.47	12.00	54.53
		10	19	9.45	6.26	5.47	12.79	*	*
		11	20	8.95	6.60	7.35	15.55	15.60	60.25

* Due to unavoidable problems during posttesting in one group, the 10-year olds did not complete the Reading and Effective Expression Sections.

Table 1

ANALYSIS OF VARIANCE -- 8 YEAR OLDS

		Words per T-Unit	Capitalization	Punctuation	Grammar	Effective Expression	Reading
Time	F	24.26	20.80	14.96	2.73	.04	32.20
	PR > F	.0001*	.0001*	.0005*	.11	.84	.0001*
School x Time	F	3.37	0.00	4.90	.63	.04	.46
	PR > F	.08	1.00	.03*	.43	.85	.50

*Significant at .05 level

Table 2

ANALYSIS OF VARIANCE -- 9, 10, 11 YEAR OLDS

		Words per T-Unit	Capitalization	Punctuation	Grammar	Effective Expression	Reading
Time	F	1.12	1.46	5.61	18.15	.84	12.87
	PR > F	.29	.23	.02*	.0001*	.36	.0006*
School x Time	F	.33	.28	1.63	1.27	1.34	9.78
	PR > F	.56	.60	.21	.26	.25	.0026*
School x Age x Time	F	8.51	1.78	1.80	.25	2.53	.54
	PR > F	.0004*	.17	.17	.78	.12	.76

* Significant at .05 level

Table 3